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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,612	01/12/2004	Young-Ho Kim	0630-1918P	8543
2292 7590 05/08/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER RIGGLEMAN, JASON PAUL	
			ART UNIT 1746	PAPER NUMBER
			NOTIFICATION DATE 05/08/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/754,612	Applicant(s) KIM ET AL.	
	Examiner Jason P. Riggelman	Art Unit 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-20 is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 7-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Foreign References</u> . |

DETAILED ACTION

Response to Arguments

1. Applicant's reply filed on 3/27/2007 is acknowledged. Current pending claims are 1-20. Claims 1 and 13 have been amended.
2. Applicant's arguments and amendments, filed 3/27/2007, have been fully considered and are persuasive with regards to the 102 (b) and 103 (a) rejections of claims 1-20. The rejections are withdrawn. Specifically, claim 1 has been amended to claim that "the induction motor to rotate the inner tub with a rotational speed lower than" which is patentably distinct from Bae et al. (US Patent No. 5669095) which teaches that in the washing operation the dehydrating tub does not rotate. Claim 13 has been amended to claim that the "induction motor to rotate the inner tub and pulsator" which is patentably distinct from Lim et al. (US Patent Application Publication No. 2002/0166349) which teaches that the tub can be turned opposite the pulsator and at a different speed by the action of the pulsator, paragraph [0096]. The remaining prior art cannot be combined to overcome these amendments.
3. The objections to the drawings and the specification are withdrawn in view of the applicant's amendments and arguments.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoon (International Publication No. WO02/40761), or in the alternative, under 35 U.S.C. 103(a) as obvious over Yoon (International Publication No. WO02/40761) in view

of Dausch et al. (US Patent No. 5669095) and Koshiga et al. (European Patent Application No. EP0949374).

1. Yoon teaches a washing machine comprising an outer tub 100, inner tub (outer tub 200), induction motor, which has a rotor 50a and stator 50b, Fig. 3. It is known that rotors have a certain air gap from an outer circumference of a stator and generate a rotational force by mutual electromagnetic operation with the stator. Note: the outer drum 200 and inner drum 300 are not formed as one unit (pg. 9, Lines 19-20). The rotation transmission rotates the inner tub with a rotational speed lower than a rotational speed of the induction motor during the laundering operation. The rotational speed of the induction motor is identical to the rotational speed of the inner tub during the dewatering operation (pg. 11, Lines 13-25). A washing machine casing is an inherent feature of a washing machine. The rotation transmission includes a sun gear 315 which engages planetary gears 71 and 72. The outer circumference of the planetary gears are meshed with an inner circumference of the ring gear (gear part 215a of the shaft extension 215). The sun gear is installed at an upper portion of the drive shaft (inner drum shaft 310), which is connected to the induction motor. The inner tub is rotated co-axially with a rotational center of the rotor.

2. A clutching device first and second one way rotation means 401 and 402 is present for selectively transmitting the rotational force of the induction motor only to the sun gear or to the sun gear and the ring gear simultaneously.

3. In the alternative, in regards to claim 1, Yoon does not explicitly teach an induction motor; however, many people such as Dausch et al. (US Patent No. 5669095)

teach the use of an induction motor 40 for driving a washing machine. Dausch et al. teaches that AC induction motors are commonly used in mass-manufactured household appliances as such motors are comparatively simple, reliable, robust, and effectively provide the motive power for the various functions of a washing machine (Column 4, Lines 39-44). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoon with Dausch et al. to create a washing machine which has a simple, reliable, and robust driving motor.

4. In the alternative, in regards to claim 5, Yoon does not explicitly teach a specific air gap from an outer circumference of the stator; however, Koshiga et al. teaches, paragraph [0025], the use of a rotor 45a having a magnet on its outer circumference for apply a magnetic field and a stator 45b disposed at the outer circumferential side of the magnet for applying a magnetic field to the rotor. A gap S is provided between the stator 45b and the rotor 45a. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoon with Koshiga et al. to create a washing machine which has a rotor and stator function effectively.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon (International Publication No. WO02/40761), as applied to claims 1-2 above, and further in view of Mikio et al. (Japanese Patent Application Publication No. 2001-204989).

7. Yoon does not teach a clutching device comprised of spline shafts (no details are given); however, Mikio et al. teaches a clutching device including a first spline shaft 18 formed on a circumference of a connecting shaft for connecting the sun gear with the induction motor. A second spline shaft 15 is extended from a side of the ring gear toward the first spline shaft. A clutch 14 is movably disposed between the first spline shaft and the second spline shaft and selectively meshed with only the second spline shaft or the first spline shaft or with both spline shafts simultaneously, Fig. 3, paragraph [0028] of machine translation. The movable clutch 14 moves according to a self-weight bias (gravity) and the elastic force of a compression spring 16, paragraph [0024] of machine translation. The use of a pair of splines with a clutching device is advantageous because the clutch can be placed inside the rotor allowing a savings in size of the washing machine (more compact), paragraph [0008] of machine translation. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoon with Mikio et al. to create a compact washing machine.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon (US Patent No. 6176108) as modified by Mikio et al. (Japanese Patent Application Publication No. 2001-204989), as applied to claim 3 above, and further in view of Brien (US Patent No. 5209085).

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9. People of ordinary skill in the art are aware that solenoids can be used to actuate/deactuate common devices. Yoon (as modified by Mikio et al.) does not teach a solenoid for moving the clutch; however, Brien teaches the use of a solenoid 25 which controls the clutch. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoon (as modified by Mikio et al.) with Brien to create a washing machine which utilizes a solenoid to create an electronically controllable clutching system which reduces both the number and wear of mechanical gear alternatives, Brien (Column 1, Lines 36-44).

Allowable Subject Matter

5. Claims 13-20 allowed.

6. Claims 7-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

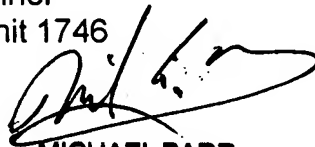
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason P. Riggleman whose telephone number is 571-272-5935. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JPR

Jason P Riggleman
Examiner
Art Unit 1746



MICHAEL BARR
SUPERVISORY PATENT EXAMINER

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